

§ 27.1357 Circuit protective devices.

(a) Protective devices, such as fuses or circuit breakers, must be installed in each electrical circuit other than—

(1) The main circuits of starter motors; and

(2) Circuits in which no hazard is presented by their omission.

(b) A protective device for a circuit essential to flight safety may not be used to protect any other circuit.

(c) Each resettable circuit protective device ("trip free" device in which the tripping mechanism cannot be overridden by the operating control) must be designed so that—

(1) A manual operation is required to restore service after tripping; and

(2) If an overload or circuit fault exists, the device will open the circuit regardless of the position of the operating control.

(d) If the ability to reset a circuit breaker or replace a fuse is essential to safety in flight, that circuit breaker or fuse must be located and identified so that it can be readily reset or replaced in flight.

(e) If fuses are used, there must be one spare of each rating, or 50 percent spare fuses of each rating, whichever is greater.

(Secs. 313(a), 601, 603, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425); and sec. 6(c) of the Dept. of Transportation Act (49 U.S.C. 1655(c)))

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§ 27.1361 Master switch.

(a) There must be a master switch arrangement to allow ready disconnection of each electric power source from the main bus. The point of disconnection must be adjacent to the sources controlled by the switch.

(b) Load circuits may be connected so that they remain energized after the switch is opened, if they are protected by circuit protective devices, rated at five amperes or less, adjacent to the electric power source.

(c) The master switch or its controls must be installed so that the switch is easily discernible and accessible to a crewmember in flight.

§ 27.1365 Electric cables.

(a) Each electric connecting cable must be of adequate capacity.

(b) Each cable that would overheat in the event of circuit overload or fault must be at least flame resistant and may not emit dangerous quantities of toxic fumes.

§ 27.1367 Switches.

Each switch must be—

(a) Able to carry its rated current;

(b) Accessible to the crew; and

(c) Labeled as to operation and the circuit controlled.

LIGHTS

§ 27.1381 Instrument lights.

The instrument lights must—

(a) Make each instrument, switch, and other devices for which they are provided easily readable; and

(b) Be installed so that—

(1) Their direct rays are shielded from the pilot's eyes; and

(2) No objectionable reflections are visible to the pilot.

§ 27.1383 Landing lights.

(a) Each required landing or hovering light must be approved.

(b) Each landing light must be installed so that—

(1) No objectionable glare is visible to the pilot;

(2) The pilot is not adversely affected by halation; and

(3) It provides enough light for night operation, including hovering and landing.

(c) At least one separate switch must be provided, as applicable—

(1) For each separately installed landing light; and

(2) For each group of landing lights installed at a common location.

§ 27.1385 Position light system installation.

(a) *General.* Each part of each position light system must meet the applicable requirements of this section, and each system as a whole must meet the requirements of §§ 27.1387 through 27.1397.

(b) *Forward position lights.* Forward position lights must consist of a red and a green light spaced laterally as